REMARKS

In reply to the Final Office Action mailed July 1, 2005, and in view of the following remarks, reconsideration is requested. Claims 5 and 19-48 remain in the application of which claims 5, 24, 30, 36, 42 and 43 are independent.

Rejections under 35 U.S.C. 102

Claims 5, 21, 23, 24, 27, 29, 30, 33, 35, 36, 39, 41 and 43-44, of which claims 5, 24, 30, 36 and 43 are independent, were rejected under 35 U.S.C. §102 in view of U.S. Patent 6,279,061 ("Aoki").

According to Aoki, an editor (personal computer) 1 "is connected to a digital cassette recorder 3 via an IEEE . . . 1394 bus 11." Col. 2, lines 23-27. "A conversion device 2 is also connected to the editor 1 via the 1394 bus 11." Col. 2, lines 29-30. "A hard disk drive (HDD) 4 is connected to the conversion device 2 via an IDE . . . interface 12." Col. 2, lines 30-32.

According to Aoki, the conversion device 2 includes a "PHY 51" which performs DS-coding demodulation on packets, which include image data, that are received from the bus 11 and performs DS-coding modulation on packets, which include image data, that are to be provided to the bus 11. See Col. 2, lines 20-40. The Office Action asserts that this section of Aoki discusses "frame by frame control" (see Office Action, page 2, line 20 and page 4, line 3), but instead this section of Aoki merely describes this modulation and demodulation. Note also, for example, Aoki at Col. 4, lines 35-52:

> "[A] command packet . . . is supplied from the editor 1 to the PHY 51 of the conversion device 2 via the 1394 bus 11. The PHY 51 DS-coding demodulates the command packet that has been supplied via the 1394 bus 11, and outputs a resulting packet to the link 52."

To play video data from the HDD 4, according to Aoki, there is a "play" command from the editor 1 which may be accepted by the conversion device 2. See Aoki, Col. 7, lines 42-45. After the play command is issued, the conversion device 2 "converts [the] 1394 interface command play into an IDE interface command READ." Aoki, Col. 7, lines 47-48. An IDE controller 71 in the conversion device 2 converts this READ command into more specific commands to the HDD 4, which provides the data to the IDE controller 71. See Aoki, Col. 7,

lines 48-56. The IDE controller 71 returns a response to the system controller 54 in the conversion device 2. See Aoki, Col. 7, lines 56-59. The system controller 54 repeats the READ commands to the IDE controller 71 until an instruction to stop the playback operation is made. See Aoki, Col. 7, lines 60-65.

To write video data to the HDD 4, according to Aoki, there is a "record" command from the editor 1. See Col. 5, lines 1 and 9. After a record command is issued, "the system controller 54 controls the LINK 52 to have it extract data included in an isochronous packet that is input from the PHY 51 and supply the extracted data to the FIFO memory 61." Aoki, Col. 5, lines 9-12. "The FIFO memory 61 sets a full flag when it has stored image data of, for instance, one frame . . . or more." Aoki, Col. 5, lines 21-23. "In response to the setting of the full flag, first the IDE controller 71 supplies the HDD 4 with addresses and commands corresponding to the data to be recorded." Aoki, Col. 5, lines 23-26. In particular, "[t]he IDE controller 71 sequentially repeats a process of reading out image data from the FIFO memory on a frame-by-frame basis, converting the read-out image data into a data block suitable for the IDE interface 12, and outputting it to the HDD 4." Aoki, Col. 5, lines 38-42. Contrary to the Office Action, this section of Aoki does not describe frame by frame control over the 1394 bus 11, but instead describes operations by the IDE controller 71 in the conversion device 2 to write data on the HDD 4 over the IDE bus 12.

Thus, it can be seen that the editor 1 in Aoki sends either a PLAY command or a RECORD command over the 1394 bus to the conversion device 2, which in turn causes the IDE controller in the conversion device 2 to communicate with the HDD 4 to read or write data. The transfer of video data over the 1394 bus is done using standard 1394 isochronous data packets. See Aoki, col. 5, lines 10-11 and col. 6, lines 18-20. Thus Aoki does not teach using "frame by frame flow control" over high speed serial bus, as recited in independent claims 5, 24, 30, 36 and 43. Note that the claims recite this frame by frame flow control by further reciting that a request packet indicates a request to "transfer video data defining a video frame" and sending a plurality of data packets including the "video data defining the request video frame."

Accordingly, the independent claims 5, 24, 30, 36 and 43 are distinguishing over Aoki. The remaining claims 21, 23, 27, 29, 33, 35, 39, 41 and 44 are dependent claims and thus are distinguishing over Aoki for at least the same reasons.

Further, regarding dependent claim 44, the Office Action relies on a description of a packet sent by a transmission *source* when that *source* obtains bus control under an arbitration sequence under IEEE-1394. According to the Office Action, such a *source* sends a packet including "a data prefix that may contain speed information." No reference is cited for such an assertion and a citation to such a reference is respectfully requested to assist in completing the record. Nonetheless, in contrast to the assertions in the Office Action, claim 44 recites that *request packets from the recipient* (not status packets from a source node) of transmitted data includes a packet rate field. Note that in claim 43, these request packets are sent to indicate that the recipient is capable of receiving video data. Thus, Aoki (or IEEE-1394) fails to teach the limitations of claim 44, and the rejection is traversed.

Rejections under 35 U.S.C. 103

Claims 19-20, 22, 25-26, 28, 31-32, 34, 37-38, 40, 42 and 45-48, of which claim 42 is independent and the remainder of which are dependent claims, were rejected under 35 U.S.C. §103 in view of Aoki and U.S. Patent 5,241,382 ("Paik"). These rejections are respectfully traversed.

Aoki was discussed above. As noted above, Aoki does not teach using "frame by frame flow control" over high speed serial bus, as recited in independent claim 42. Note that claim 42 recites this frame by frame flow control by further reciting that a request packet indicates a request to "transfer video data defining a video frame" and sending a plurality of data packets including the "video data defining the request video frame." Accordingly, this rejection is traversed.

The Office Action also states that Aoki does not teach a "boundary signal indicating whether the data packet includes a last component of the video data of the requested frame," and relies instead on Paik.

The claim language of a "boundary signal" does not read on Paik (Fig. 2 and 3; Col. 7, lines 14-45, Col. 8, lines 43-56). The plain language of the claim makes it clear that the boundary signal in a data packet indicates whether that data packet includes the last component of the requested video frame. The term "component" is defined at page 7, lines 9-10 of the present application: "A component is a portion of the data being transferred, such as a

luminance component of a pixel of video data." In the portion of Paik cited in the Office Action, no such "boundary signal" is provided.

Accordingly, independent claim 42 and dependent claims 22, 28, 24 and 40 are patentable over Aoki and Paik.

Regarding dependent claims 19, 20, 25, 26, 31, 32, 37, 38 and 45-48, the portions of Paik (Fig. 2 and 3; Col. 7, lines 14-45, Col. 8, lines 43-56) cited in the Office Action fail to teach anything about the precision (i.e., the number of bits used to represent) of a component being greater than a byte as claimed. For example, Paik does not describe handling video in which components are represented, for example, by 10-bits or 12-bits. As noted at col. 7, lines 14-45, of Paik, the precision of the video data is one byte. Thus, neither Aoki nor Paik teaches processing video data having a precision of greater than a byte. Accordingly, the rejection of these dependent claims in view of Aoki and Paik is traversed.

CONCLUSION

In view of the foregoing amendments and remarks, this application should now be in condition for allowance. A notice to this effect is respectfully requested. If the Examiner believes, after this reply, that the application is not in condition for allowance, the Examiner is requested to call the Applicants' attorney at the telephone number listed below.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicants hereby request any necessary extension of time. If there is a fee occasioned by this response, including an extension fee, please charge any fee to **Deposit Account No. 50-0876.**

Respectfully submitted,

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